Plastic Ingenuity, Inc. 2008 Annual Report for WDNR Green Tier Program

Executive Summary

Plastic Ingenuity, Inc. was formally accepted into the Wisconsin Department of Natural Resources Green Tier Program October 30, 2007. Plastic Ingenuity is enrolled in Tier I of the program.

Plastic Ingenuity has two facilities in Wisconsin that are covered by the Green Tier program. A facility located in Cross Plains, WI is home to Plastic Ingenuity's headquarters and employs 272 team members. The primary function of this facility is to manufacture thermoformed plastic packaging for the food, retail, and medical markets. A second facility is located in Mazomanie, WI and employs 69 team members. This facility extrudes plastic sheet and manufactures thermoformed plastic packaging. Plastic Ingenuity has long been mindful of its impact on the natural environment and is fully committed to reducing its environmental footprint by participating and excelling at its Green Tier-related activities.

In 2008, Plastic Ingenuity was focused on developing, implementing, and refining the written Environmental Management System (EMS). The EMS was developed to meet the requirements of the Green Tier Program as well as ISO 14001. During this process, critical environmental aspects were identified for improvement. The main aspects targeted were storm water flow improvements, energy use reduction, and reducing the amount of plastic and metal scrap that goes to landfill. By implementing resource use reduction, active & innovative recycling efforts, and working to positively influence the health of the Black Earth Creek, Plastic Ingenuity continues to work on reducing its environmental footprint. Plastic Ingenuity has been dedicated to recycling for over 30 years by reusing rather than land-filling, scrap plastic. Recycling millions of pounds of plastics annually and proposing a new rain garden to further improve Plastic Ingenuity's impact on Black Earth Creek are but two ways this environmental footprint is being reduced.

Critical Environmental Initiatives since Acceptance into Green Tier Program

Implementation and Auditing of an Environmental Management System (EMS): The written EMS is complete and in place. The system includes a full Management Review which is completed each summer. Plastic Ingenuity's Environmental Management Review has occurred for a number of years preceding involvement with the Green Tier program. In the near future, the system will be declared compliant with ISO 14001 as is allowed under 1 (c)(1) of the Standard. An internal audit encompassing applicable environmental aspects was completed prior to July 1, 2008 in preparation for Management Review of the EMS.

Resource Use Reduction

In 2007, a photovoltaic (solar) power generation system was installed at the Cross Plains facility. A goal for Plastic Ingenuity Inc. is to eventually derive at least 10% of its power from renewable sources. This will be a continual effort as new technologies emerge and become feasible options. The installation of the photovoltaic system is a first step in that direction.

kWh generated per year by photovoltaic system	lbs. CO_2 prevented from being released in 1 year
13,438 kWh	24,981 lbs.

Lighting Improvements

At the Cross Plains facility, most metal halide and T12 lighting has been replaced with T8 fluorescent lighting, which will reduce power demands from the facilities. This has been an ongoing project starting in 2003 and continues to the present. The energy savings since the project began has been significant. As shown below, hundreds of thousands of kWh's have been saved.

Project Years	Estimated kWh saved since project inception
5	885,166 kWh

Cross Plains Heat Reclamation Project

In 2008, a compressor heat recovery system was installed in the Cross Plains facility. During the design and implementation stages, the goal was to heat the warehouse in the Cross Plains facility with excess heat from our compressors. In the past, this heat was not reclaimed and subsequently lost. The system went on-line in November, 2008.

Months of operation in 2008	Average per month Btu's recovered	Total cost savings by recovering compressor heat in 1.5 months
1.5	123.9 million	$1,858.00

Mazomanie Heat Reclamation

Since 2006, waste compressor heat has assisted in heating the Mazomanie facility. As was the case in the Cross Plains facility, prior to 2006, this heat was not reclaimed and subsequently lost. In 2008, roughly 5000 Therms (500 million Btu) were recovered and used for heat.

Storm Water Flow Improvement Projects since inception into Program

Plastic Ingenuity's Cross Plains facility is located on the banks of the Black Earth Creek, a Class I trout stream. We recognize the environmental significance of the pristine creek and the environmental stewardship that our location provides. We have decided to reduce the impact of urban runoff from our facility as well as the 77 acre watershed that drains through our property by installing a number of rain gardens. The goal is to improve the quality and reduce the temperature of water flowing from the Plastic Ingenuity property directly into the Black Earth Creek. In the years preceding 2007, three large rain gardens had been created on the northern property edge. These rain gardens effectively filtered the storm waters flowing across the property prior to it entering the Black Earth Creek. The temperature reduction impact for these rain gardens was modeled using the Dane County TURM model to reduce the temperature below the ambient stream temperature of the Black Earth Creek. The reduction estimates are shown in the table below for the existing rain gardens.

In June 2007, a cooperative rain garden project between Plastic Ingenuity and Park Elementary School in Cross Plains commenced. Plastic Ingenuity funded the project which was intended to improve the quality, and reduce the temperature, of storm waters flowing into Black Earth Creek, which is located on the western edge of Plastic Ingenuity's property. The rain garden serves a functional purpose by reducing storm water flow to Black Earth Creek, and doubles as an outdoor classroom for elementary school students at Park School.

Normal temperature of creek	**Temperature of storm water prior to existing rain garden**	**Temperature of storm water after filtration during the summer months.**
40 to 65 degrees F	81.1 degrees F	66.6 degrees F

For 2009, with input from Wisconsin Department of Natural Resources representatives, another rain garden has been proposed for the western edge of Plastic Ingenuity's property. With the approval of the DNR, work could begin in the spring of 2009. While all rain gardens on the property are vital, the western rain garden may be the most important in terms of direct impact on the Creek. The rain garden will be designed to handle flowing water directly from the main employee parking lot, where a significant amount of pollutants could potentially be generated. Estimated temperature reductions for the proposed rain garden are shown below based on TURM model.

Normal temperature of creek	**Estimated temperature of storm water prior to rain garden (worst case summer conditions)**	**Estimated temperature of storm water after filtration during the summer months.**
40 to 65 degrees F	99.4 degrees F	79.8 degrees F

Clean Sweep

In order to reduce the amount of salt, sand, and other debris being deposited into the Black Earth Creek during winter thaws or other melting events, Plastic Ingenuity has

instituted the use of a high efficiency street sweeper. This street sweeper vacuums salt, sand, and other debris into a central collection system as it sweeps the main employee parking lots. The goal of this sweeping, which occurs twice per year, is to reduce the amount of debris that could be swept into the Black Earth Creek during rain, snow, or melt events. A secondary benefit to the high efficiency sweeping of the parking lots is the reduced load on our Gabion basket system, the main filtration system of storm waters flowing from Plastic Ingenuity's main parking lot. While the sweeping occurs twice per year, Plastic Ingenuity's Facilities Manager is continually reviewing whether additional sweeping is needed.

Recycling Efforts

In an effort to limit the amount of items Plastic Ingenuity landfills, a significant amount of Production-related items are sent for recycling or other environmentally-sound disposal methods. Items such as office paper, scrap metals, waste oils, process waters, ballasts and fluorescent lighting, shrink-wrapping, plastic PVC banding used to secure rolls for shipment, cardboard, and electronics are a few examples of the overall recycling efforts at Plastic Ingenuity. Other potentially recyclable items are consistently being analyzed and reviewed for possible inclusion in Plastic Ingenuity's recycling program. The above items are audited annually to ensure compliance with our recycling program.

Lbs. paper recycled (annual estimate)	**Lbs. shrink wrapping recycled (annual estimate)**	**Lbs. roll cores recycled (annual estimate)**	**Lbs. cardboard recycled (annual estimate)**	**Total estimated lbs. material kept from landfill**
39,000 lbs.	41,600 lbs.	78,000 lbs.	36,400 lbs.	195,000 lbs.

Closed Loop Systems

A second 'recycling' effort undertaken at Plastic Ingenuity is the reuse of scrap plastic. In the production process, the vast majority of scrap plastic is not discarded to landfill. This is one of the largest and most environmentally sound practices undertaken by Plastic Ingenuity. It is estimated that thousands of tons of scrap plastic annually is ground and reused in the Extrusion process. There is a two-fold benefit for Plastic Ingenuity. First, by not land filling hundreds of tons of plastic, the landfill space saved is significant. Secondly, there is a large financial benefit to reusing scrap material by reducing the need to purchase more plastic pellet. As an example of how much plastic is recycled, over 1 million lbs. of one particular material that was not reused in our process was sent for recycling in 2008.

Management Review of the EMS and Functional Equivalency

The annual management review of Plastic Ingenuity's EMS and general environmental performance occurred in July, 2008. Prior to the management review, a thorough inspection & review of both WI facilities occurred with members of our Management Staff and with outside parties. Plastic Ingenuity's environmental aspects are given priority attention during the audit. The annual Management Review had been completed for a number of years prior to inclusion into the Green Tier Program.

The EMS has been reviewed by an outside consultant to ensure compliance with the ISO 14001 Standard. The EMS has also been written and reviewed to ensure compliance with Wis. Stats 299.83(1)(dg) and ISO 14001. Care was taken to ensure that all 12 points laid out in Wis. Stats 299.83(1)(dg) were satisfied.

Economic Benefits Generated by Plastic Ingenuity's Environmental Efforts

While the efforts undertaken in 2007 and 2008 to reduce our environmental burden were not necessarily a result of participating in the WDNR Green Tier program, the program will continue to focus Plastic Ingenuity's environmental vision and promote continued ecological performance. Metrics to measure the net benefit of each environmental improvement area were developed in late 2008. Primary focus will be the amount of scrap plastic recycled/reused and not sent to landfill and energy savings from using alternative energy sources (solar).

Projects in Focus for 2009

Each of the items identified above will continue to be focus areas for Plastic Ingenuity in 2009. Recycling efforts will continue, and be improved upon, where feasible. Recycling or reusing as many materials as possible that may have otherwise been sent to landfill is one significant way Plastic Ingenuity can positively impact the environment.

In 2009, Plastic Ingenuity will further its effort toward self-declaration of compliance with ISO 14001 requirements. The stated goal is to have Plastic Ingenuity's Environmental Management System in compliance with requirements set forth in ISO 14001. In order to achieve this stated goal, four areas have been identified as critical environmental improvement areas. These include electrical energy use reduction, storm water flow improvements at the Cross Plains facility, fewer pounds of scrap plastic being land filled, and improving scrap metal recycling efforts.